

REMARKS

This Amendment is submitted in response to the February 24, 2004 Office Action issued in connection with the above-captioned patent application. The pending claims are claims 1-24, with claims 1, 11, 17 and 22 being in independent form. By this Amendment, the independent claims have been amended, as set forth above. No new matter has been added. It is respectfully requested that the Examiner review and consider the foregoing claim amendments in conjunction with the following remarks.

Initially in the Office Action, the Examiner has objected to the drawings because reference sign 20 in FIG. 1 is not mentioned in the specification. In response, applicants have amended page 10, line 2 of the specification to include a reference to element 20. Inasmuch as the specification has been amended, it is believed that no amendments to the drawings are required.

Turning now to substantive matters, applicants' invention is directed to a method and system for displaying a sign language animation of a speech component of an audio/video signal. The sign language animation is displayed simultaneously with a visual image corresponding to a video component of the audio/video signal. This is accomplished without the use of pre-stored images or image components which are later accessed by, for example, coding in an audio component or derived from an audio component, and then assembled or retrieved to render a video signal simulating sign language gestures. Instead, and in accordance with the inventive method of claim 1, the technique used comprises the mapping of the speech component to a sign language animation model to generate animation model parameters which correspond to sign language images. An animation signal is then generated from the animation model parameters and, thereafter, an animation image is rendered from the animation signal on the monitor display screen.

Claim 1, as now amended, specifically recites that the rendering of the animated image from the animation signal is performed "without accessing an image database containing pre-stored images". In other words, no sign language images need to be stored to perform the inventive method of claim 1. Rather, the rendering of the animation image is performed directly from the animation signal.

Independent claims 11, 17 and 22 have also been amended, in a manner similar to claim 1, by reciting that the rendering of the animation signal occurs "without accessing an image database containing pre-stored messages".

Turning now to the Examiner's claim rejections, claims 1, 6, 7, 9, 11-13, 15, 17, 19, and 21-23 have been rejected under 35 U.S.C. 102(e) as allegedly "being clearly anticipated by" U.S. Patent No. 6,460,056 (Horii). Applicants respectfully disagree. Horii discloses a method for displaying sign language images. As shown in FIG. 1, the apparatus used for performing the method includes an "image dictionary storage [6]". As acknowledged in the Office Action, the "image dictionary storage device comprises a plurality of images related to character codes". Horii explains that the image dictionary storage device comprises sign language images that may be obtained by adding motion to images produced by computer graphics". See page 3 of the Office Action. According to Horii "the image data stored in the image dictionary storage device 6 is generally compressed because of its massive amount." (Col. 3, lines 17-19). It is clear from this description that Horii utilizes pre-stored images of sign language signals which are then retrieved by processing a speech signal to obtain character codes stored in the character information storage device 5 which are then used to access certain stored images in the image dictionary 6. In other words, any "rendering" of a sign language image that is produced by the Horii method and device only occurs upon accessing an image dictionary storage device 6 which contains a "massive amount" of image data.

In contrast, applicants' method and device do not utilize any image database to retrieved pre-stored images. Rather, the animation image is rendered from the animation signal which, in turn, is derived from animation model parameters obtained from the mapping of the speech component. For these reasons, it is believed that the now-amended independent claims 1, 11, 17 and 22 are patentable over Horii.

Also in the Office Action, the Examiner has rejected claims 3-5 as allegedly rendered obvious by Horii. However, because these claims depend from now-amended independent claim 1, it is believed that these claims are also patentable for at least the same reasons as set forth above.

Likewise, claims 8, 14 and 20 and claims 10, 16, 18 and 24 have been rejected as allegedly rendered obvious from the combination of Horii in combination with cited secondary references, namely, U.S. Patent No. 6,665,643 (Lande et al.) and an article titled "Text-Driven Automatic Frame Generation Using MPEG-4 Synthetic/Natural Hybrid Coding for 2-D Head-and-Shoulder Scene". However, because neither of these references discloses the rendering from an animation signal "without accessing an image database containing pre-stored images" to produce an animation image containing sign language gestures, the combination of the secondary references with Horii does not render applicants' claims obvious.

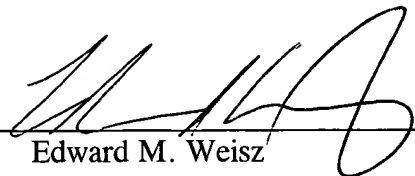
For all of the foregoing reasons, it is believed that all claims are now in condition for immediate allowance, and a favorable action in that regard is earnestly solicited.

It is believed that no fees or charges are required at this time in connection with the present application; however, if any fees or charges are required at this time, they may be charged to our Patent and Trademark Office Deposit Account No. 03-2412.

Respectfully submitted,

COHEN, PONTANI, LIEBERMAN & PAVANE

By

A handwritten signature in black ink, appearing to read 'E. Weisz', is written over a horizontal line.

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